

parent ROADMAP

SUPPORTING YOUR CHILD IN GRADE SIX

ENGLISH LANGUAGE ARTS





*America's schools
are working
to provide higher
quality instruction
than ever before.*

The way we taught students in the past simply does not prepare them for the higher demands of college and careers today and in the future. Your school and schools throughout the country are working to improve teaching and learning to ensure that all children will graduate high school with the skills they need to be successful.

In English language arts and literacy, this means three major changes. Students will continue reading and writing. But in addition to stories and literature, they will read more texts that provide facts and background knowledge in areas including science and social studies. They will read more challenging texts and be asked more questions that will require them to refer back to what they have read. There will also be an increased emphasis on building a strong vocabulary so that students can read and understand challenging material.

What your child will be learning in grade six English language arts and literacy



In grade six, students will read a range of challenging books, articles, and texts, and will be expected to demonstrate their understanding of the material by answering questions and contributing to class discussions. In writing, students will continue to work on their use of language, sentence structure, and organization of ideas. They will also be expected to integrate information from different sources and respond to challenging content through written interpretation and analysis. Activities in these areas will include:

- Providing detailed summaries of texts
- Determining the theme of a text and how it is conveyed
- Describing how a particular story or play unfolds and how characters respond to plot developments
- Using a range of reading strategies to determine the meaning of unknown words as they are used in a text
- Comparing and contrasting various texts, including poems, stories, and historical novels
- Understanding the figurative and connotative (implied) meaning of words and phrases
- Identifying and evaluating specific claims or arguments in a text
- Supporting written claims or arguments with clear reasons and relevant evidence
- Producing clear and coherent writing appropriate to the task, purpose, and audience
- Participating in class discussions about various texts and topics
- Conducting short research projects to answer a question, drawing on several sources




The figurative meaning of a word or phrase often goes beyond the literal definition, such as the phrase “raining cats and dogs.”

Partnering with your child's teacher

Don't be afraid to reach out to your child's teacher—you are an important part of your child's education. Ask to see a sample of your child's work or bring a sample with you. Ask the teacher questions like:

- Is my child reading on grade level? How is my child doing in writing?
- What are my child's strengths and weaknesses?
- What can I do at home to make sure that my child is successful?



In grade six, students will read a wide range of literature, including stories, plays, and poems. Additionally, they will read to learn information about history, the world, science, and other areas. Here are just a few examples of how your child will develop important reading skills across grade levels.

READING LITERATURE

Grade Five Reading

- Students determine the theme of a story, play, or poem from details in the text, including how characters respond to challenges or how the speaker in a poem reflects upon a topic, and summarize the text.
- Students describe how a narrator's or speaker's point of view influences how events are described.

Grade Six Reading

- Students determine the theme or central idea of a text and how it is conveyed through particular details. Students also provide an objective summary of the text.
- Students explain how an author develops the point of view of the narrator or speaker in a text.

Grade Seven Reading

- Students determine a theme or central idea of a text and analyze its development over the course of the text. Students also provide an objective summary of the text.
- Students analyze how an author develops and contrasts the points of view of different characters or narrators in a text.

READING FOR INFORMATION

Grade Five Reading

- Students quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.
- Students draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently.

Grade Six Reading

- Students cite evidence from the text to support analysis of what the text says explicitly as well as inferences drawn from the text.
- Students integrate information presented in different media or formats (such as visually or through numbers) as well as in words to develop a coherent understanding of a topic or issue.

Grade Seven Reading

- Students cite several pieces of evidence from the text to support analysis of what the text says explicitly as well as inferences drawn from the text.
- Students compare and contrast a text to an audio, video, or multimedia version of the text, analyzing each medium's portrayal of the subject (such as how the delivery of a speech affects the impact of the words).



As they progress through grade levels, students will be asked more questions that require them to cite details or information from increasingly challenging texts. This will encourage them to become observant and analytical readers.

Writing tasks in grade six may include stories, essays, reports, and persuasive papers. Here are just a few examples of how your child will develop important writing skills across grade levels.

Grade Five Writing

- Students introduce a topic clearly, providing a general observation and focus, and develop the topic with facts, definitions, concrete details, quotations, or other information.
- Students provide a concluding statement or section related to the information or explanation presented.
- Students group related information logically.
- Students link ideas within and across categories of information using words, phrases, and clauses such as *in contrast* or *especially*.
- Students use precise language and subject-specific vocabulary.

Grade Six Writing

- Students introduce a topic and develop the topic with relevant facts, definitions, concrete details, quotations, or other information.
- Students provide a concluding statement or section that follows from the information or explanation presented.
- Students organize ideas, concepts, and information using strategies such as definition, classification, comparison/contrast, and cause/effect.
- Students use appropriate transitions to clarify the relationships among ideas and concepts.
- Students use precise language and subject-specific vocabulary.

Grade Seven Writing

- Students introduce a topic clearly, previewing what is to follow, and develop the topic with relevant facts, definitions, concrete details, quotations, or other information.
- Students provide a concluding statement or section that follows from and supports the information or explanation presented.
- Students organize ideas, concepts, and information using strategies such as definition, classification, comparison/contrast, and cause/effect.
- Students use appropriate transitions to create cohesion and clarify the relationships among ideas and concepts.
- Students use precise language and subject-specific vocabulary to inform about or explain the topic.



Some writing guidelines may seem similar from year to year. However, with practice at each grade level, students continue to learn and apply the rules of standard written English and to strengthen and expand their vocabulary, use of language, and sophistication in the development and organization of ideas.

Helping your child learn outside of school



1. Provide time and space for your child to read independently. This time should be free from distractions such as television.
2. Ask your child what topics, events, or activities he or she likes. Then look for books, magazines, or other materials about those topics that would motivate your child to read.
3. It is also helpful when your child sees other people reading at home. You could share what you have read.
4. Make time for conversation at home. Discuss current events, shared interests, and future aspirations for education and career.
5. Visit museums, zoos, theaters, historical sites, aquariums, and other educational places to help increase your child's exposure to new knowledge and vocabulary.
6. Use technology to help build your child's interest in reading. There are several websites where students can read books or articles online. The computer will help with words the student cannot read independently. Libraries also have computers students can use to access those sites. Feel free to ask a librarian or teacher for suggestions.

Additional Resources



For more information on the Common Core State Standards for English language arts and literacy, go to <http://www.corestandards.org/about-the-standards/key-points-in-english-language-arts> or <http://www.commoncoreworks.org>.

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MATHEMATICS





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In mathematics, this means three major changes. Teachers will concentrate on teaching a more focused set of major math concepts and skills. This will allow students time to master important ideas and skills in a more organized way throughout the year and from one grade to the next. It will also call for teachers to use rich and challenging math content and to engage students in solving real-world problems in order to inspire greater interest in mathematics.

What your child will be learning in grade six mathematics



A **dependent variable** is a number whose value depends on other factors, while the value of an **independent variable** is set. For example, in a problem involving a constant speed (such as 60 mph), students may be asked how many miles will be travelled in 30 minutes. Since distance is determined by time, distance is the dependent variable, and time is the independent variable.

In grade six, your child will learn the concept of rates and ratios and use these tools to solve word problems. Students will work on quickly and accurately dividing multi-digit whole numbers and adding, subtracting, multiplying, and dividing multi-digit decimals. Students will extend their previous work with fractions and decimals to understand the concept of rational numbers—any number that can be made by dividing one integer by another, such as $\frac{1}{2}$, 0.75, or 2. Students will also learn how to write and solve equations—mathematical statements using symbols, such as $20+x = 35$ —and apply these skills in solving multi-step word problems. Activities in these areas will include:

- Understanding and applying the concepts of ratios and unit rates, and using the correct language to describe them (for example, the ratio of wings to beaks in a flock of birds is 2 to 1, because for every 2 wings there is 1 beak)
- Building on knowledge of multiplication and division to divide fractions by fractions
- Understanding that positive and negative numbers are located on opposite sides of 0 on a number line
- Using pairs of numbers, including negative numbers, as coordinates for locating or placing a point on a graph
- Writing and determining the value of expressions with whole-number exponents (such as $15+3^2$)
- Identifying and writing equivalent mathematical expressions by applying the properties of operations. For example, recognizing that $2(3+x)$ is the same as $6+2x$
- Understanding that solving an equation such as $2+x = 12$ means answering the question, “What number does x have to be to make this statement true?”
- Representing and analyzing the relationships between independent and dependent variables
- Solving problems involving area and volume

Partnering with your child's teacher

Don't be afraid to reach out to your child's teacher—you are an important part of your child's education. Ask to see a sample of your child's work or bring a sample with you. Ask the teacher questions like:

- Where is my child excelling? How can I support this success?
- What do you think is giving my child the most trouble? How can I help my child improve in this area?
- What can I do to help my child with upcoming work?

Here are just a few examples of how students will learn about and work with fractions in grade six.

Grade Five Mathematics

- Add and subtract fractions with different denominators (bottom numbers)
- Multiply a fraction by a whole number or another fraction
- Divide fractions by whole numbers and whole numbers by fractions to solve word problems

Grade Six Mathematics

- Divide fractions by fractions using models and equations to represent the problem
- Solve word problems involving division of fractions by fractions

Grade Seven Mathematics

- Add, subtract, multiply, and divide rational numbers in any form, including whole numbers, fractions, and decimals)
- Solve multi-step problems involving positive and negative rational numbers



Real-world problems give students a context for dividing fractions by fractions.

Example of a problem involving the division of fractions.

Ann has $3\frac{1}{2}$ lbs of peanuts for the party. She wants to put them in small bags each containing $\frac{1}{2}$ lb. How many small bags of peanuts will she have?



Students use their knowledge of fractions to see that there are 7 halves in $3\frac{1}{2}$ lbs, so there will be 7 bags of peanuts.



Students can also find how many halves are in $3\frac{1}{2}$ by applying the traditional procedure of dividing $3\frac{1}{2}$ by $\frac{1}{2}$.

$$3\frac{1}{2} = \frac{7}{2}$$

$$\frac{7}{2} \div \frac{1}{2} = \frac{7}{2} \times \frac{2}{1} = \frac{14}{2} = 7$$

Here are just a few examples of how students will develop an understanding of ratios and proportions in grade six.

Grade Five Mathematics

- Explain why a fraction is equal to another fraction
- Interpret multiplication as scaling (resizing)

Grade Six Mathematics

- Understand the concept of a ratio and use the correct language to describe it
- Understand the concept of a unit rate (the rate per unit, or a ratio with a denominator of 1) and use the correct language to describe it
- Use ratio and rates to solve real-world problems

Grade Seven Mathematics

- Analyze proportional relationships and use them to solve real-world problems
- Calculate the unit rates associated with ratios of fractions, such as the ratio of $\frac{1}{2}$ a mile for every $\frac{1}{4}$ of an hour
- Recognize and represent proportional relationships in various ways, including using tables, graphs, and equations
- Identify the unit rate in tables, graphs, equations, and verbal descriptions of proportional relationships



Students use diagrams and tables to think through and solve real-world problems involving ratios.

Example of a problem involving ratios

A slime mixture is made by mixing glue and liquid laundry starch in a ratio of 3 to 2. How much glue and how much starch are needed to make 90 cups of slime?

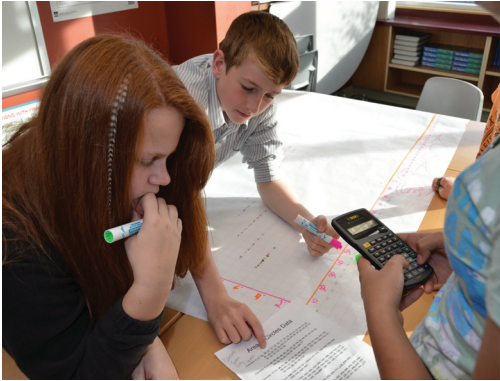
Glue **Starch**



Parts	Quantities
5 parts	90 cups
1 part	$90/5 = 18$ cups
2 parts	$2 \times 18 = 36$ cups
3 parts	$3 \times 18 = 54$ cups

Using knowledge of ratios and proportions, students see that if each cup of slime is made up of 3 parts glue and 2 parts starch, there are 5 parts in each cup. They can then compute the quantity of one, two, and three parts of 90 cups to determine the exact amounts of glue and starch needed.

Helping your child learn outside of school



1. Ask your child to calculate the unit rates of items purchased from the grocery store. For example, if 2 pounds of flour cost \$3.00, how much does flour cost per pound?
2. Have your child determine the amount of ingredients needed when cooking. For example, if a recipe calls for 8 cups of rice to serve 4 people, how many cups of rice do you need to serve 6 people?
3. Encourage your child to stick with it whenever a problem seems difficult. This will help your child see that everyone can learn math.
4. Praise your child when he or she makes an effort, and share in the excitement when he or she solves a problem or understands something for the first time.

Additional Resources



For more information on the Common Core State Standards for mathematics, go to <http://www.corestandards.org/about-the-standards/key-points-in-mathematics> or <http://www.commoncoreworks.org>.

For more information on the standards in mathematics related to ratios/proportions or fractions, go to <http://commoncoretools.me/category/progressions/>.

For math games and challenges to do at home, go to <http://www.figurethis.org/download.htm> or www.24game.com.

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In English language arts and literacy, this means three major changes. Students will continue reading and writing. But in addition to stories and literature, they will read more texts that provide facts and background knowledge in areas including science and social studies. They will read more challenging texts, and be asked more questions that will require them to refer back to what they have read. There will also be an increased emphasis on building a strong vocabulary so that students can read and understand challenging material.

What your child will be learning in grade seven English language arts and literacy



In grade seven, students will continue to develop the ability to cite relevant evidence when interpreting or analyzing a text or supporting their points in speaking and writing. Your child will also build academic vocabulary as he or she reads more complex texts, including stories, plays, historical novels, poems, and informational books and articles. Activities in these areas will include:

- Analyzing how the form or structure of a play or poem contributes to its meaning
- Analyzing how particular elements of a story or play interact (like how the setting shapes the characters or plot)
- Determining how an author develops and contrasts the points of view of different characters or narrators in a text
- Conducting short research projects, drawing on several sources and identifying related questions for further research and investigation
- Engaging in a range of classroom discussions on topics and texts, expressing ideas clearly and building on the ideas of others
- Identifying a speaker's argument and specific claims and evaluating the reasoning and evidence behind these claims
- Using clues such as word roots or add-ons to a word (such as the prefix *hyper-*, which means 'excessive' in the words *hyperactive* and *hypersensitive*) to determine the meaning of a word
- Interpreting figures of speech or references to literature or mythology in a text
- Writing for a range of purposes and audiences



For example, the phrase “a heart of gold” is a figure of speech.

Partnering with your child's teacher

Don't be afraid to reach out to your child's teacher—you are an important part of your child's education. Ask to see a sample of your child's work or bring a sample with you. Ask the teacher questions like:

- Is my child's work meeting grade-level expectations?
- What are my child's strengths and weaknesses?
- What can I do at home to make sure that my child is successful?

In grade seven, students will read a wide range of literature, including stories, plays, and poems. Additionally, they will read to learn information about history, the world, science, and other areas. Here are just a few examples of how your child will develop important reading skills across grade levels.

READING LITERATURE

Grade Six Reading

- Students determine the theme or central idea of a text and how it is conveyed through particular details. Students also provide a summary of the text without personal opinions or judgments.
- Students explain how an author develops the point of view of the narrator or speaker in a text.

Grade Seven Reading

- Students determine a theme or central idea of a text and analyze its development over the course of the text. Students also provide an objective summary of the text.
- Students analyze how an author develops and contrasts the points of view of different characters or narrators in a text.

Grade Eight Reading

- Students determine a theme or central idea of a text and analyze its development over the course of the text, including its relationship to the characters, setting, and plot. Students also provide an objective summary of the text.
- Students analyze how differences in the points of view of the characters and the audience or reader create such effects as suspense or humor.

READING FOR INFORMATION

Grade Six Reading

- Students cite evidence from the text to support analysis of what the text says explicitly as well as inferences drawn from the text.
- Students integrate information presented in different media or formats (such as visually, or through numbers) as well as in words to develop a coherent understanding of a topic or issue.

Grade Seven Reading


- Students cite several pieces of evidence from the text to support analysis of what the text says explicitly as well as inferences drawn from the text.
- Students compare and contrast a text to an audio, video, or multimedia version of the text, analyzing each medium's portrayal of the subject (such as how the delivery of a speech affects the impact of the words).

Grade Eight Reading

- Students cite evidence from the text that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text.
- Students evaluate the advantages and disadvantages of using different mediums (such as print or digital text, video, or multimedia) to present a particular topic or idea.



As they progress through grade levels, students will be asked more questions that require them to cite details or information from increasingly challenging texts. This will encourage them to become observant and analytical readers.



Writing tasks in grade seven may include stories, essays, reports, and persuasive papers. Here are just a few examples of how your child will develop important writing skills across grade levels.

Grade Six Writing

- Students introduce a topic and develop the topic with relevant facts, definitions, concrete details, quotations, or other information.
- Students provide a concluding statement or section that follows from the information or explanation presented.
- Students organize ideas, concepts, and information using strategies such as definition, classification, comparison/contrast, and cause/effect.
- Students use appropriate transitions to clarify the relationships among ideas and concepts.
- Students use precise language and subject-specific vocabulary.

Grade Seven Writing

- Students introduce a topic clearly, previewing what is to follow, and develop the topic with relevant facts, definitions, concrete details, quotations, or other information.
- Students provide a concluding statement or section that follows from and supports the information or explanation presented.
- Students organize ideas, concepts, and information using strategies such as definition, classification, comparison/contrast, and cause/effect.
- Students use appropriate transitions to create cohesion and clarify the relationships among ideas and concepts.
- Students use precise language and subject-specific vocabulary to inform or explain the topic.

Grade Eight Writing

- Students introduce a topic clearly, previewing what is to follow, and develop the topic with relevant, well-chosen facts, definitions, concrete details, quotations, or other information.
- Students provide a concluding statement or section that follows from and supports the information or explanation presented.
- Students organize ideas, concepts, and information into broader categories.
- Students use appropriate and varied transitions to create cohesion and clarify the relationships among ideas and concepts.
- Students use precise language and subject-specific vocabulary to inform about or explain the topic.



Some writing guidelines may seem similar from year to year. However, with practice at each grade level, students continue to learn and apply the rules of standard written English and to strengthen and expand their vocabulary, use of language, and sophistication in the development and organization of ideas.

Helping your child learn outside of school



1. Provide time and space for your child to read independently. This time should be free from distractions such as television.
2. Ask your child what topics, events, or activities he or she likes. Then look for books, magazines, or other materials about those topics that would motivate your child to read.
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What your child will be learning in grade seven mathematics



An **equation** is a mathematical statement where letters (known as **variables**) are used to represent unknown numbers, such as $2x + 6 = 12$. An **expression** is an open-ended sentence, such as $2x + 6$ or $5 - y$. In this expression, the variables are “ x ” and “ y .”

In grade seven, students will further develop their understanding of rates and ratios, using tables, graphs, and equations to solve real-world problems involving proportional relationships. Students will also work on quickly and accurately solving multi-step problems involving positive and negative rational numbers—any number that can be made by dividing one integer by another, such as $\frac{1}{2}$, 0.75, or 2. Additionally, students will expand their knowledge of geometry and apply the properties of operations to solve real world problems involving the measurement of multi-dimensional objects. Activities in these areas will include:

- Determining whether two quantities are in a proportional relationship and using knowledge of rates, ratios, proportions, and percentages to solve multi-step problems
- Identifying the unit rate of change (the constant rate at which the value of a variable changes) in tables, graphs, equations, and verbal descriptions
- Calculating the unit rates associated with ratios of fractions, including quantities measured in different units (for example, the ratio of $\frac{1}{2}$ a mile for every $\frac{1}{4}$ of an hour means that you travel 2 miles in an hour)
- Solving problems using equations to find the value of one missing variable
- Applying the properties of operations to generate equivalent mathematical expressions
- Solving multi-step word problems by adding, subtracting, multiplying, and dividing positive and negative rational numbers in any form (including whole numbers, fractions, or decimals)
- Understanding that numbers cannot be divided by 0
- Converting rational numbers to decimals using long division
- Describing situations in which positive and negative quantities combine to make 0
- Finding the area of two-dimensional objects and the volume and surface area of three-dimensional objects

Partnering with your child's teacher

Don't be afraid to reach out to your child's teacher—you are an important part of your child's education. Ask to see a sample of your child's work or bring a sample with you. Ask the teacher questions like:

- Where is my child excelling? How can I support this success?
- What do you think is giving my child the most trouble? How can I help my child improve in this area?
- What can I do to help my child with upcoming work?

Here are just a few examples of how students will learn about and work with expressions and equations in grade seven

Grade Six Mathematics

- Write and evaluate numerical expressions involving whole number exponents (such as $5+3^2$)
- Read, write, and evaluate expressions in which letters stand for numbers. For example, “subtract y from 5” can be written $5-y$
- Understand that solving an inequality or an equation such as $2+x=12$ means answering the question, “what number does x have to be to make this statement true?”
- Represent two quantities that change in relationship to one another (for example, weight increasing along with height)

Grade Seven Mathematics

- Re-write an expression in different forms to show different solutions to a problem or how quantities are related
- Use variables to represent quantities and construct simple equations and inequalities (for example, $5x + 2 > 10$) to solve problems
- Solve multi-step word problems involving positive and negative numbers
- Understand that solving an inequality or an equation such as $\frac{1}{4}(x+5) = 21$ means answering the questions, “what number does x have to be to make this statement true?”

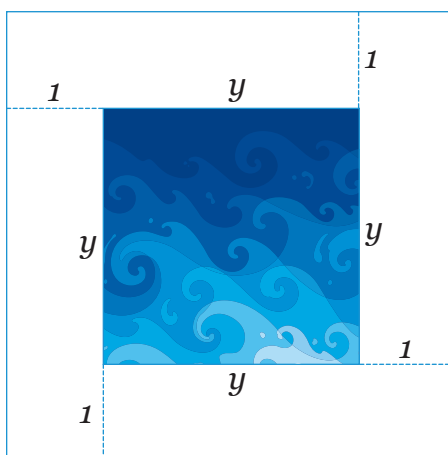
Grade Eight Mathematics

- Know and apply the properties of integer exponents (positive numbers, negative numbers, or 0) to write equivalent expressions (such as $4^2 \cdot 4^3 = 4^5$, where “ \cdot ” means to multiply)
- Graph proportional relationships, identifying the unit rate as the slope (how steep or flat a line is)
- Solve linear equations (equations that make a straight line when they are graphed, such as $y=2x+1$)



Writing the same expression in different ways allows students to think through and solve real-world problems.

Example of a problem involving mathematical expressions



In expressing the number of one foot square tiles needed to border a square pool with a length of y (where y represents a whole number), students might write $4y+1+1+1+1$, $4y + 4$, or $4(y + 1)$. All are different ways to express the same value.

Here are just a few examples of how students will develop an understanding of ratios and proportions in grade seven.

Grade Six Mathematics

- Understand the concept of a ratio and use the correct language to describe it
- Understand the concept of a unit rate (the rate per unit, or a ratio with a denominator of 1) and use the correct language to describe it
- Use ratio and rates to solve real-world problems

Grade Seven Mathematics

- Analyze proportional relationships and use them to solve real-world problems
- Calculate the unit rates associated with ratios of fractions, such as the ratio of $\frac{1}{2}$ a mile for every $\frac{1}{4}$ of an hour
- Recognize and represent proportional relationships in various ways, including using tables, graphs, and equations
- Identify the unit rate in tables, graphs, equations, and verbal descriptions

Grade Eight Mathematics

- Understand the connections between proportional relationships, lines, and linear equations
- Graph proportional relationships, interpreting the unit rate as the slope of the graph
- Use physical models, transparencies, or other tools to show that *similar* objects have the same shape but different sizes (for example, a small square magnified into a larger square)



In grade seven, students use diagrams to solve problems involving proportions. Students use diagrams and tables to think through and solve real-world problems involving ratios.

Example of a problem involving proportions

Problem: After a 20% discount, the price of a skateboard is \$148. What was the price before the discount?

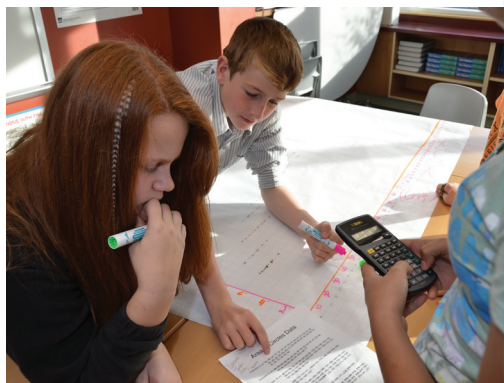
Solution: After a 20% discount, the price is 80% of the original price. So 80% of the original price is \$148. Students use this information to find the value of 20% and 100% of the original price.

20%	} 80% = 4 x 20%	} 20% + 80% = 100%	} 80% = 148
20%			
20%			
20%			
20%			
20%	} 20% = ?		20% = 80% ÷ 4
			20% = \$148 ÷ 4
			20% = \$37
			100% = 20% + 80%
			100% = \$37 + \$148
			100% = \$185



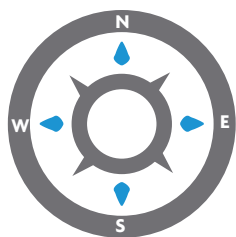
Students will also learn to write and solve the equation representing this situation as $0.8x = 148$

Helping your child learn outside of school



1. Ask your child to calculate the unit rates of items purchased from the grocery store. For example, if 2 pounds of flour cost \$3.00, how much does flour cost per pound?
2. Use store advertisements to engage your child in working with numbers. For example, if a store advertises 30% off, have your child estimate the dollar amount of the discount, as well as the sale price of an item.
3. Have students use four 4's and any of the four arithmetic operations to write the numbers from 0 to 20 (for example, $44-44=0$; $4\cdot4-4\cdot4=0$. How do you get 1? $4/4+4-4=1$).
4. Encourage your child to stick with it whenever a problem seems difficult. This will help your child see that everyone can learn math.
5. Praise your child when he or she makes an effort, and share in the excitement when he or she solves a problem or understands something for the first time.

Additional Resources



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For math games and challenges to do at home, go to <http://www.figurethis.org/download.htm>.

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SUPPORTING YOUR CHILD IN GRADE EIGHT
ENGLISH LANGUAGE ARTS





*America's schools
are working
to provide higher
quality instruction
than ever before.*

The way we taught students in the past simply does not prepare them for the higher demands of college and careers today and in the future. Your school and schools throughout the country are working to improve teaching and learning to ensure that all children will graduate high school with the skills they need to be successful.

In English language arts and literacy, this means three major changes. Students will continue reading and writing. But in addition to stories and literature, they will read more texts that provide facts and background knowledge in areas including science and social studies. They will read more challenging texts, and be asked more questions that will require them to refer back to what they have read. There will also be an increased emphasis on building a strong vocabulary so that students can read and understand challenging material.

What your child will be learning in grade eight English language arts and literacy



In grade eight, students will read major works of fiction and nonfiction from all over the world and from different time periods. They will continue to learn how to understand what they read and evaluate an author's assumptions and claims. They will also conduct research that will require the analysis of resources and accurate interpretation of literary and informational text. Activities in these areas will include:

- Identifying what a reading selection explicitly says and drawing inferences based on evidence from the text
- Analyzing the impact of specific word choices on meaning and tone, including analogies or allusions to other texts
- Evaluating the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient
- Connecting information and ideas efficiently and effectively in writing
- Analyzing the purpose of information presented in diverse media formats, such as video clips or interactive maps
- Participating in class discussions on various topics, texts, and issues by expressing ideas and building on the ideas of others
- Developing a large vocabulary of multi-use academic words and phrases
- Interpreting figures of speech, such as puns or verbal irony, in context



“Verbal irony” is when words are used to say something other than their usual meaning. For example, calling something “as clear as mud” in order to say something isn’t clear at all.

Partnering with your child’s teacher

Don’t be afraid to reach out to your child’s teacher—you are an important part of your child’s education. Ask to see a sample of your child’s work or bring a sample with you. Ask the teacher questions like:

- Is my child producing quality work?
- What are my child’s strengths and weaknesses?
- What additional support or resources can I provide my child at home?

In grade eight, students will read a wide range of literature, including stories, plays, and poems. Additionally, they will read to learn information about history, the world, science, and other areas. Here are just a few examples of how your child will develop important reading skills across grade levels.

READING LITERATURE

Grade Seven Reading

- Students determine a theme or central idea of a text and analyze its development over the course of the text. Students also provide an objective summary of the text.
- Students analyze how an author develops and contrasts the points of view of different characters or narrators in a text.

Grade Eight Reading

- Students determine a theme or central idea of a text and analyze its development over the course of the text, including its relationship to the characters, setting, and plot. Students also provide an objective summary of the text.
- Students analyze how differences in the points of view of the characters and the audience or reader create such effects as suspense or humor.

Grade Nine Reading

- Students determine a theme or central idea of a text and analyze in detail its development over the course of the text, including how it emerges and is shaped and refined by specific details. Students provide an objective summary of the text.
- Students analyze a particular point of view or cultural experience reflected in a work of literature from outside the United States.

READING FOR INFORMATION

Grade Seven Reading

- Students cite several pieces of evidence from the text to support analysis of what the text says explicitly as well as inferences drawn from the text.
- Students compare and contrast a text to an audio, video, or multimedia version of the text, analyzing each medium's portrayal of the subject (such as how the delivery of a speech affects the impact of the words).

Grade Eight Reading

- Students cite evidence from the text that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text.
- Students evaluate the advantages and disadvantages of using different mediums (such as print or digital text, video, or multimedia) to present a particular topic or idea.

Grade Nine Reading

- Students cite strong and thorough evidence from the text to support an analysis of what the text says explicitly as well as inferences drawn from the text.
- Students analyze various accounts of a subject told in different mediums (such as a person's life story recounted in print, video, and multimedia), determining which details are emphasized in each account.



As they progress through grade levels, students will be asked more questions that require them to cite details or information from increasingly challenging texts. This will encourage them to become observant and analytical readers.

Writing tasks in grade eight may include stories, essays, reports, and persuasive papers. Here are just a few examples of how your child will develop important writing skills across grade levels.

Grade Seven Writing

- Students introduce a topic clearly, previewing what is to follow, and develop the topic with relevant facts, definitions, concrete details, quotations, or other information.
- Students provide a concluding statement or section that follows from and supports the information or explanation presented.
- Students organize ideas, concepts, and information using strategies such as definition, classification, comparison/contrast, and cause/effect.
- Students use appropriate transitions to create cohesion and clarify the relationships among ideas and concepts.
- Students use precise language and subject-specific vocabulary to inform about or explain the topic.

Grade Eight Writing

- Students introduce a topic clearly, previewing what is to follow, and develop the topic with relevant, well-chosen facts, definitions, concrete details, quotations, or other information.
- Students provide a concluding statement or section that follows from and supports the information or explanation presented.
- Students organize ideas, concepts, and information into broader categories.
- Students use appropriate and varied transitions to create cohesion and clarify the relationships among ideas and concepts.
- Students use precise language and subject-specific vocabulary to inform or explain the topic.

Grade Nine Writing

- Students introduce a topic and develop the topic with well-chosen, relevant, and sufficient facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic.
- Students provide a concluding statement or section that follows from and supports the information or explanation presented (such as articulating implications or the significance of the topic).
- Students organize complex ideas, concepts, and information to make important connections and distinctions.
- Students use appropriate and varied transitions to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts.
- Students use precise language and subject-specific vocabulary appropriate for the complexity of the topic.



Some writing guidelines may seem similar from year to year. However, with practice at each grade level, students continue to learn and apply the rules of standard written English and to strengthen and expand their vocabulary, use of language, and sophistication in the development and organization of ideas.

Helping your child learn outside of school



1. Provide time and space for your child to read independently. This time should be free from distractions such as television.
2. Ask your child what topics, events, or activities he or she likes. Then subscribe to magazines or look for books or other materials about those topics that would motivate your child to read.
3. It is also helpful when your child sees other people reading at home. You could share what you have read.
4. Make time for conversation at home. Discuss current events, shared interests, and future aspirations for education and career.
5. Visit museums, zoos, theaters, historical sites, aquariums, and other educational places to help increase your child's exposure to new knowledge and vocabulary.
6. Use technology to help build your child's interest in reading. There are several websites where students can read books or articles online. The computer will help with words the student cannot read independently. Libraries also have computers students can use to access those sites. Feel free to ask a librarian or teacher for suggestions.

Additional Resources



For more information on the Common Core State Standards for English language arts and literacy, go to <http://www.corestandards.org/about-the-standards/key-points-in-english-language-arts> or <http://www.commoncoreworks.org>.

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SUPPORTING YOUR CHILD IN GRADE EIGHT
MATHEMATICS





*America's schools
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The way we taught students in the past simply does not prepare them for the higher demands of college and careers today and in the future. Your school and schools throughout the country are working to improve teaching and learning to ensure that all children will graduate high school with the skills they need to be successful.

In mathematics, this means three major changes. Teachers will concentrate on teaching a more focused set of major math concepts and skills. This will allow students time to master important ideas and skills in a more organized way throughout the year and from one grade to the next. It will also call for teachers to use rich and challenging math content and to engage students in solving real-world problems in order to inspire greater interest in mathematics.

What your child will be learning in grade eight mathematics



A **linear equation** is an equation such as $y = mx + b$ that makes a straight line when it is graphed. Students learn that the values of **(x,y)** on the graph are the solutions of the equation, and **m** is the slope of the line.

In grade eight, students take their understanding of unit rates and proportional relationships to a new level, connecting these concepts to points on a line and ultimately using them to solve linear equations that require them to apply algebraic reasoning as well as knowledge of the properties of operations. Students will also expand their understanding of numbers beyond rational numbers to include numbers that are irrational—meaning that they cannot be written as a simple fraction, such as the square root of 2 or $\sqrt{2}$. Activities in these areas will include:

- Understanding that every *rational* number (such as $\frac{1}{2}$, 0.3, 2, or -2) can be written as a decimal, but that the decimal form of an *irrational* number (such as $\sqrt{2}$) is both non-repeating and infinite
- Applying the properties of exponents to generate equivalent numerical expressions
- Determining the value of square roots of small perfect squares (such as $\sqrt{49}=7$) and cube roots of small perfect cubes (such as $\sqrt[3]{64}=4$)
- Graphing proportional relationships and interpreting the unit rate as the *slope* (how steep or flat a line is)
- Solving and graphing one- and two-variable linear equations
- Understanding that a *function* is a rule that assigns to each value of x exactly one value of y , such as $y=2x$, a rule that would yield such ordered pairs as (-2,-4), (3,6), and (4,8)
- Comparing the properties of two functions represented in different ways (in a table, graph, equation, or description)
- Determining *congruence* (when shapes are of equal size and shape) and *similarity* (same shape but different sizes)
- Learning and applying the Pythagorean Theorem (an equation relating the lengths of the sides of a right triangle: $a^2 + b^2 = c^2$)
- Solving problems involving the volume of cylinders, cones, and spheres

Partnering with your child's teacher

Don't be afraid to reach out to your child's teacher—you are an important part of your child's education. Ask to see a sample of your child's work or bring a sample with you. Ask the teacher questions like:

- Where is my child excelling? How can I support this success?
- What do you think is giving my child the most trouble? How can I help my child improve in this area?
- What can I do to help my child with upcoming work?

Here are just a few examples of how students will learn about and work with expressions and equations in grade eight.

Grade Seven Mathematics

- Re-write an expression in different forms to show how quantities are related
- Use variables to represent quantities and construct simple equations and inequalities to solve problems
- Solve multi-step word problems involving positive and negative numbers
- Understand that solving an inequality or an equation such as $\frac{1}{4}(x+5) = 21$ means answering the questions, *what number does x have to be to make this statement true?*

Grade Eight Mathematics

- Understand the connections between proportional relationships, lines, and linear equations
- Use linear equations to graph proportional relationships, interpreting the unit rate as the slope of the graph
- Know and apply the properties of integer exponents (positive numbers, negative numbers, or 0) to write equivalent expressions (such as $4^2 \cdot 4^3 = 4^5$)

High School Mathematics

- Solve quadratic equations (equations that include the square of a variable, such as $5x^2 - 3x + 3 = 0$)
- Use the structure of an expression to identify ways to rewrite it. For example, $x^4 - y^4 = (x^2)^2 - (y^2)^2$

“•” is a multiplication symbol students use in grade eight



Students interpret and compare linear relationships represented in different ways, making the connection between equations, tables of values, and graphs.

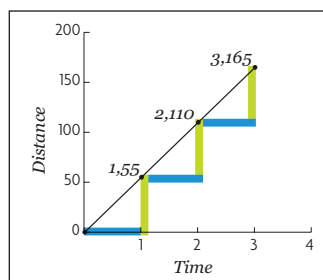
Problem: Two cars are traveling from point A to point B. Their speeds are represented on a graph and in a table. Which car is traveling faster?

Solution: Even though car #1 starts out ahead by 4 miles, students identify the rate of change—or slope—of the equations presented in the table and graph as equal (55 miles per hour), meaning that both cars are travelling at the same speed.

Car # 1
 $y = 55x + 4$

Time (x)	Distance (y)
1	59
2	114
3	169

Car # 2
 $y = 55x$



Here are just a few examples of how an understanding of rates, ratios, and proportions will help students learn about and work with functions in grade eight and high school.

Grade Seven Mathematics

- Analyze proportional relationships and use them to solve real-world problems
- Calculate the unit rates associated with ratios of fractions, such as the ratio of $\frac{1}{2}$ a mile for every $\frac{1}{4}$ of an hour
- Recognize and represent proportional relationships in various ways, including using tables, graphs, and equations
- Identify the unit rate in tables, graphs, equations, and verbal descriptions of proportional relationships

Grade Eight Mathematics

- Understand that a function is a rule that assigns to each input exactly one output, and the graph of a function is the set of ordered pairs consisting of an input and the corresponding output
- Compare the properties of two functions each represented in a different way (for example, in a table, graph, equation, or description)
- Determine the rate of change and initial value of a function based on a description of a proportional relationship or at least two given (x,y) values

High School Mathematics

- Calculate and interpret the average rate of change of a function over a given interval
- Understand and use function notation (for example, $f(x)$ denotes the output of f corresponding to the input x)
- For a function that models a relationship between two quantities, interpret key features of graphs and tables, including intercepts, intervals where the function is increasing or decreasing, relative maximums and minimums, etc.



Students apply their understanding of rates and ratios to analyze pairs of inputs and outputs and to identify rates of change and specific values at different intervals.

This table shows the height of a tree, in inches, in the months after it was planted.

Month	Height, in inches
3	51
5	54
9	60
11	63

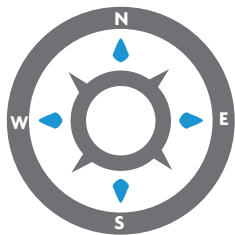
Given these sets of values, students determine that the rate of change is constant: a tree replanted as a sapling grows 3 inches every 2 months, which is $\frac{3}{2}$ —or 1.5—inches each month. Therefore, students can compute the tree's height when it was replanted by taking its height at month 3 (51 inches) and subtracting 3 months of growth: $51 - \frac{3}{2} \cdot 3 = 51 - 4.5 = 46.5$ inches.

Helping your child learn outside of school



1. Ask your child to do an Internet search to determine how mathematics is used in specific careers. This could lead to a good discussion and allow students to begin thinking about their future aspirations.
2. Have your child use magazines, clip art, and other pictures to find and describe examples of *similar* and *congruent* figures
3. Using different objects or containers (such as a can of soup or a shoebox), ask your child to estimate surface area and volume, and check the answer together.
4. Encourage your child to stick with it whenever a problem seems difficult. This will help your child see that everyone can learn math.
5. Prompt your child to face challenges positively and to see mathematics as a subject that is important. Avoid statements like “*I wasn’t good at math*” or “*Math is too hard.*”
6. Praise your child when he or she makes an effort, and share in the excitement when he or she solves a problem or understands something for the first time.

Additional Resources



For more information on the Common Core State Standards for mathematics, go to <http://www.corestandards.org/about-the-standards/key-points-in-mathematics> or <http://www.commoncoreworks.org>.

For more information on the standards in mathematics related to ratio and proportion and expressions and equations, go to <http://commoncoretools.me/category/progressions/>.

For math games and challenges to do at home, go to <http://www.figurethis.org/download.htm>, www.24game.com, and http://www.kenken.com/play_now.